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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FA108-PCT	FOR FURTHER ACTION		See Form PCT/PEA416
International application No. PCT/US2004/000097	International filing date (day/month/year) 02.01.2004	Priority date (day/month/year) 03.01.2003	
International Patent Classification (IPC) or national classification and IPC C08G18/38			
Applicant E.I. DU PONT DE NEMOURS AND COMPANY et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input checked="" type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 30.07.2004		Date of completion of this report 31.01.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Vaccaro, E Telephone No. +49 89 2399-6049 	

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/US2004/000097

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-17 as originally filed

Claims, Numbers

1-25 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/US2004/000097

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-22, 25
Inventive step (IS)	Yes: Claims	
	No: Claims	1-25
Industrial applicability (IA)	Yes: Claims	1-25
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

and /or

2. Non-written disclosures (Rule 70.9)

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

D1: US 6399736 B

D2: US 5412056A

1. Claim 1 of the application discloses a coating composition comprising a binder consisting of : (a) a polyisocyanate crosslinking agent, (b) an isocyanate-reactive component derived from aspartic acid, (c) an optional polymer that reacts with isocyanate, (d) an optional oligomer that reacts with isocyanate, (e1) a disubstituted phenol antioxidant or a hydroperoxide decomposer, (e2) a UV light absorber and (e3) a hindered amine light stabilizer. The components that are "optionally" present in the composition can and will be neglected.
2. D1 discloses a coating obtained by reacting an aspartic acid derivative like (b) of the application with a isocyanate (a) and an additive consisting of an antioxidant (a hindered phenol), a UV light absorber and a hindered amine light stabilizer (col. 1, lines 48-56, col. 2, line 37 through col. 13, line 64). Said compositions may optionally contain components (c) and (d) above. Therefore, the subject-matter of claims 1-22 and 25 does not appear to be new over D1 (Art. 33(2) PCT).
3. Any of the documents cited as relevant prior art in the application, page 2, lines 20-22, lends itself to be used as the basis for a lack of inventive step reasoning. Most pertinent seems to be for instance D2. D2 discloses a coating composition containing a polyaspartic compound (b), an isocyanate (a), a hindered amine light stabilizer (e3) and a UV absorber (e2) (examples). The present application differs from D2 in that a disubstituted phenol antioxidant or a hydroperoxide decomposer (e1) is missing. The technical problem underlying the present application is to provide a clear coating composition with good weatherability (UV resistance) and that cures quickly (page 1, lines 28-33). The problem is solved in that application by adding a phenol antioxidant such as Irganox 1135 (see p. 14 of the application). The

Irganox additives are well known in the field of weatherability improvement, and are commercially available. Thus, the skilled person, aware of D2 and trying to improve the durability of a coating containing an isocyanate (a) and an aspartic compound (b), would think of a phenol from the Irganox family as a matter of routine experimentation. The subject-matter of the other independent claims, the uses of the coating composition and relative processes, are also obvious in the field of coatings for automotive applications. Therefore, the subject-matter of claims 1-25 does not appear to be inventive over D2 in the sense of Art. 33(3) PCT.

4. As a general remark, it seems that the addition of widely known and used antioxidants, UV- and light-stabilizers, such as Irganox and Tinuvin, to a known composition of polyaspartic acid derivative and polyisocyanate, to improve the composition's durability, does not involve an inventive step, as such additives only produce the desired and expected effect for which they are sold: improve the UV and light stability. Therefore there is no surprising or somehow unexpected technical effect and hence, the subject-matter of claims 1-25 does not appear to satisfy the requirements of Art. 33(3) PCT over any of the prior art cited in the search report.

Re Item VI

Certain documents cited

Certain published documents

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO03/057374	17/07/2003	18/11/2002	26/12/2001

5. WO 03/057374, a P document cited in the search report, could be further relevant with regard to the assessment of novelty and inventive step, according to Rules 43bis.1 and 70.10 PCT.